

## Primary health care through COVID-19 pandemic, from the viewpoint of Govt. Medical Officers: A qualitative study

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### Abstract:

**Introduction:** Medical Officers are the leaders of primary health care. This study had been conducted in a descriptive theoretical framework using constructivist paradigm. The objectives of the study were to: 1) Explore the voice of Medical Officers on delivering primary health care service through COVID-19 pandemic. 2) Find out factors influencing the quality of health care as prominent to Medical Officers. **Materials & methods:** The research was conducted by using key informant interviews and free listing techniques. Thematic analysis of verbatim transcript used both descriptive and inductive coding in repeated cycles. The factors affecting primary health care were analysed for their frequency. Smith's salience score was used to list them in order of their importance to PHC Medical Officers. **Results:** in this study 15 Medical Officers were interviewed and out of them, 10 had MBBS degree and 5 had AYUSH qualifications. Analysis of verbatim transcript gave 60 codes/key words and 12 categories. The codes and categories constructed 6 themes viz; 1. The first line and basic health care, 2. A sense of fear to share symptoms and resistance to COVID test and vaccination, 3) 3.1: Pandemic management took centre stage altering workload, work dynamics. and outstretched the available staffs of PHC. Govt. guidelines played a reference point. 3.2: Telephonic consultation was an add on. 4.1 Infection can't be prevented but disease can be prevented. 4.2: The adoption to neo work dynamic came with a cost: Stress & Burnout 5) COVID-19 vaccine provided a strategic advantage to health care workers 6) Scope for improvement: 6.1: Human resource strengthening 6.2: Accommodation of voice of MOs in planning. Based on the salience score, the dominant facilitating factors were 1) Telephonic consultation 2) Psychological boost from COVID-19 vaccination 3) Dedicated field level work done by ASHA & ANM 4) Timely mobilisation of ILI & SARI cases 5) Govt. guidelines for hospital. Similarly, factors that acted as barriers in order of their importance were viz; 1) Limited human resources 2) Patients were afraid of consulting for fever 3) Reduced monitoring activities of other diseases 4) Additional work of RRT & screening for COVID-19 management 5) Stopped/reduced NCD screening/ new diagnosis 6) Fear of getting infected with covid-19.

**Recommendations:** For effective primary health care delivery; following steps are to be taken during an emergency like COVID-19 pandemic.

1. Emergency Preparedness: The single staff needs to be reinforced with back up staffs at PHC level to prevent blockage of service delivery.
2. During emergency:
  - I. Bridging the communication gap:
    - a) The voice of Medical Officers working at PHC level needs to actively heard in block level and district level meetings.
    - b) The district /block level plan needs to accommodate the views and feedback of PHC doctors.
  - II. The IEC need to address the fear, hesitancy, and resistance of community in public health emergency.

**Key words: COVID-19 pandemic, primary health care, Viewpoints of Medical Officers.**

**Introduction:**

The COVID-19 pandemic had made the primary health care system to perform under high demand driven environment over a prolonged period. The steps taken to control the pandemic epidemic had come had adversely impacted health care provision<sup>1,2</sup>. As quoted by WHO Director-General Tedros Adhanom Ghebreyesus "The best defence against any outbreak is a strong health system"; primary health care centres are the critical posts to deliver interventions in public health emergency<sup>3</sup>. Medical officers are the leaders of PHC with the responsibilities to implement the service delivery as per the Indian public health standard<sup>4</sup>. The evidence generated from the viewpoints of Medical Officers working at PHC level will be very useful in tailoring strategies during public health emergencies. This study had been conducted in a descriptive theoretical framework using constructivist paradigm. The objectives of the study were to:

1. Explore the voice of Medical Officers on delivering primary health care service through COVID-19 pandemic.
2. Find out factors influencing the quality of health care as prominent to Medical Officers.

**Materials & Methods:** The methodology used to conduct this research is mentioned below.

- Study design: Basic qualitative study design using both in-depth and systematic techniques<sup>5,6</sup>.
- Study period: From 1<sup>st</sup> Jan 2021 to 31<sup>st</sup> Oct 2021
- Study place: The primary health care institutions of Ganjam district of southern Odisha, India
- Study participants: Medical Officers working in the primary health centers of Odisha.
- Assumption behind selecting MOs as study participant. "PHC Medical Officers had the experience on operational aspects of delivering health care at grassroot level in pandemic and were on field decision makers. Their perception was essential for generating evidence in this research.
- Sample size: End point for sampling was till the point of data saturation.
- Sampling method<sup>7</sup>: Purposive sampling with convenient strategy was used to select the Medical Officers. The convenience was in terms of availability of Medical Officers, accessibility to the PHC hospitals while selecting study participants.
- Study Instrument: It had 4 components viz:

Domain\_1: Perception of MO on primary health care

Domain\_2: Management of health care services

Domain: 3: Facilitating factors and barriers in service delivery.

Domain 4: How primary health care can effectively adopt to public health emergencies?

- Data collection methods: Key informant interviews (in-depth technique) and free listing (systematic technique). The Medical Officers having willingness to participate & share their views were interviewed using recording device after taking informed consent. The study participants were asked to enlist the

factors influencing the quality of primary health care service during COVID 19 pandemic. After the completion of each interview the interviewer debriefed the summary of interview to the study participants for internal validation. Each study participants were given unique IDs. Data was stored in cloud storage and password protected.

- **Data Analysis:** Thematic analysis of verbatim transcript was done by manually. Both descriptive and inductive coding was done in repeated cycles and validated through brain swarming of research team. The factors affecting quality of health care as mentioned by study participants in the free listing method was analysed for their frequency, average rank & Smith's salience score. Smith's salience score was used to order those factors in terms of representativeness or prominence to the PHC Medical Officers.

**Results:** In this study 15 Medical Officers were interviewed and out of them, 10 were having MBBS degree and 5 had AYUSH qualifications.

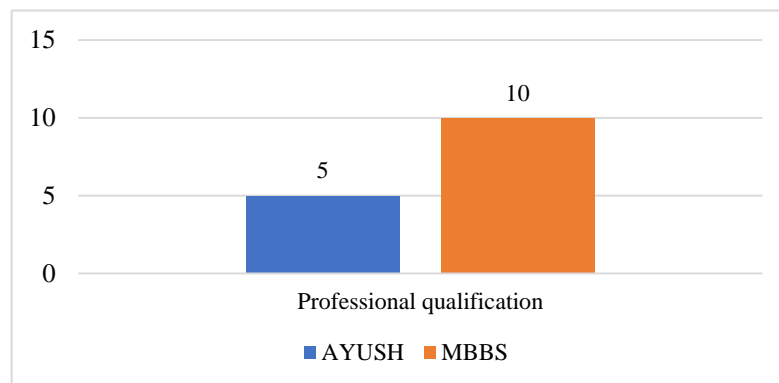


Fig \_Professional qualifications of study participants.



Facilitating factors and barriers in delivering primary health care in order of their importance as per salience score are given in Table-1.

<b>Table_1_Facilitating factors and barriers in delivering primary health care.</b>	
<b>Facilitating factors in delivering primary health care</b>	<b>Salience score</b>
1. Telephonic consultation.	0.393
2. COVID-19 Vaccination provided psychological boost.	0.364
3. Dedicated field level work done by ASHA & ANM.	0.35
4. Timely mobilisation of ILI & SARI cases.	0.2
5. Govt guidelines for hospital.	0.171
<b>Factors that acted as barriers in delivering primary health care</b>	<b>Salience score</b>
1. Limited human resources.	0.711
2. Patients were afraid of consulting for fever.	0.533
3. Reduced monitoring activities of other diseases.	0.389
4. Additional work of RRT & screening.	0.333

5. Stopped/reduced NCD screening/ new diagnosis.	0.30
6. Fear of getting infected with COVID-19.	0.233

Analysis of verbatim transcript gave 60 codes/key words and 12 categories. The codes and categories constructed 6 themes as given in table no 2.

Key words/codes	Categories	Themes
"Basic and primary level" "People are dependent". "First line of management"	1.Basic and first line of	1.The first line and basic health care
"Increase in demand for certain medicines". "Difficulty in counselling patients about new hospital guidelines " "Violence against health care providers" "Resistance to testing" "Fear among patients to fever" "Hiding of symptoms" "Vaccine resistance in initial phase"	2.Fear among patients and resistance to test and vaccine	2.A sense of fear to share symptoms and resistance to COVID test and vaccination.
"Increase field work". "Responsibility of CCC" "Vigilant for 24 x7 hrs" "Wearing PPE kit for long hrs". "Lesser OPD load" "IPD was busier with SARI cases." "Frequent change of guidelines" "Timely mobilisation of ILI & SARI cases." "Antigen testing for all cases". "Govt. guidelines were the only valid source of information". "Safe distance between patient & doctor" "LT busier with COVID test" "Routine lab test hampered." "ASHA and ANM on COVID duty" "Reduced visit to PHC by ASHA & ANM" "Major chunk of IEC on COVID-19 " "Reduced RI session points" "Reduced surveillance for other diseases" "ASHA and ANM maintained ground level system". "Stopped/reduced NCD screening/ new diagnosis. " "Uninterrupted follow up services to NCD cases." "Prioritises on pandemic control." "Reduced IEC on of other diseases" "Facility for teleconsultation" "Telephonic consultation: an add on" "Network issues: a barrier to teleconsultation" "Sufficiency of PPE for CCC" "Inadequacy of PPE for normal patient management"	3.Increased workload  4.Altered work dynamics.  5.Effect on prevention & control of diseases other than COVID-19  6.Support hand from the Govt.	3.1: Pandemic management took centre stage altering workload, work dynamics, and outstretched the available staffs of PHC. Govt. guidelines played a reference point. 3.2: Telephonic consultation was an add on.
"A belief: Exposure can't be prevented." "Constant fear of infection." "Mask, vaccine and immunity are protecting factors". "Stress due lack of family time" "Self-consolation: a coping strategy"	7.Attitude of PHC	4.1: Infection can't be prevented but disease can be prevented. 4.2: The adoption to neo work dynamic came with a cost: Stress & Burnout
"No replacement of MO, engaged in COVID Duty." "Single staff for a service category." "COVID-19 Infection of staffs blocks service." "NRHM staffs have vital role in resource distribution". "Increase in workload causing exhaustion". "No schedule for self-care" "Reduced personal life space." "Constant fear of infection" "Improved skills in managing of SARI cases"	8.Effect on functionality of PHC  9.Effect on functionality of MO	

<p>"Priority based vaccination of staffs".          "Two doses reduced severity of COVID-19 cases."          "Vaccination: a psychological advantage to staff"          "Reduced fear factor among staffs"</p>	 <p>10.Effect of COVID -19 vaccination</p>	<p>5.COVID-19 vaccine provided a strategic advantage to health care workers.</p>
<p>"Increase in staff: a first thing".          "Improvement in communication between district, CHC and PHC"          "Meetings need to come up with a plan to take suggestions from PHC MOs".          " Views need to be heard by CHC and district level".</p>	 <p>11.Capacity building"          12.Accommodation of voice of MOs in planning. "</p>	<p>6.1. Human resource strengthening          6.2 Bridging the communication gap.</p>

**Discussion:** In this study the thematic analysis generated 6 themes as discussed below.

1.The first theme was "Primary health care is a basic level and first line of management on which people are dependent". The concept was echoed by most of the study participants. Most of them shared the term " people are dependent", which further highlights the importance of the PHC institutions.

2.The second theme reflected the attitude of beneficiaries during pandemic. A sense of fear to share symptoms and resistance to COVID test and vaccination. A study using Health Belief Model found Lack of access to health professionals combined with the fear of contracting the virus while getting treated were the barriers<sup>8</sup>.

3.The third theme was on altering workload, work dynamics.

*"Single staff at service point and when either the staff or the family member got infection that particular service were blocked." (Participant MO)*

*" When medical officer was posted at covid care corner, there was no doctor at PHC" (Participant MO)*

The limited human resource because of the current staffing pattern of single health care worker for a particular service type, had made the PHC system stretched to the limits and occasional shutdown owing to COVID-19 infection of staffs. The experience was "Thrown in at the deep end" as shared by GP in a study conducted in UK<sup>9</sup>.

“, maximum works of PHC was done by ground staffs like ASHA...we stopped/reduced some services like NCD screening and YOGA classes.... first to control pandemic.

4.The fourth component of theme was: " Infection can't be prevented but disease can be prevenetd. The adoption to neo work dynamic came with a cost: Stress & Burnout". The study participants reported to have coped that phase with self-counselling. A systematic review<sup>10</sup> of qualitative studies brought the following themes on the burden of workload on health workers: 1) Inadequate preparedness 2) emotional challenges 3) Insufficient equipment 4) Information 5) work burnout. Teleconsultation facilities by govt. was helpful to Medical Officers. General physicians had a positive opinion<sup>11</sup> on teleconsultation, but the patient satisfaction was mostly on direct clinical examination as quoted by participants "Telephonic consultation is an add on to the service". In a qualitative study conducted in Southern California, the primary health care physicians perceived that telemedicine improved patient access to care but were concerned with lack of personal touch. In our study participants shared the practice of "Safe distance between patient & doctor". The implementation of teleconsultation for being an add

on needs careful planning and coordination. These views of physicians and patients were explored in a qualitative study at the primary outpatient clinics in central Portugal<sup>12</sup>.

5.The 5th theme was on COVID-19 vaccine provided a strategic advantage to health care workers. The key words from their transcript like, "Priority based vaccination of staffs", "Two doses reduced severity of COVID-19 cases, "Vaccination: a psychological advantage to staff" "Reduced fear factor among staffs" gives an insight to the acceptance and effect of COVID-19 vaccination. In a qualitative study conducted among PHC of Greece, "Safeguarding the Patients and Ourselves" and "Maintaining Provision of Care" were among the themes<sup>13</sup>. A study involving community and health care workers of UPHC in Kolkata had shed light on perception that "combination of preventive practices and vaccine together could only be the best solution" <sup>14</sup>.

6.The 6th component of theme was on scope for improvement in pandemic situation in two areas viz; Some of the quotes are shared below.

*"First thing is manpower ...we have to support our system with manpower".*

*"The communication gap first has to be resolved from PHC.CHC to District level. like drug procurement ..the equipment ....and capacity building programme for ANM & ASHA to be taken up "*

"The meetings need to come up with a plan to take suggestions from MO working at ground level.

**Conclusion and recommendations:** This study described the factors and the working environment at primary health centres of southern Odisha during COVID-19 pandemic. The learnings embedded in this study, can be a guiding tool for effective primary health care delivery during an emergency like COVID-19 pandemic. The recommendations from the evidence constructed through thematic analysis is mentioned below:

- A. Emergency Preparedness: The single staff needs to be reinforced with back up staffs at PHC level to prevent blockage of service delivery.
- B. During emergency:
  - I. Bridging the communication gap:
    - a) The voice of Medical Officers working at PHC level needs to actively heard in block level and district level meetings.
    - b) The district /block level plan needs to accommodate the views and feedback of PHC doctors.
  - II. The IEC need to address the fear, hesitancy, and resistance of community in public health emergency.

**Conflict of interest.** nil

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**IEC no:**832/18.12.2020 MKCG MCH, Berhampur, Ganjam, Odisha.

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### **Annexures\_1**

#### **Interview guide**

Hello Sir/Madam, myself Dr.....Greetings from Department of Community Medicine, M.K.C.G Medical College, Berhampur.

We are conducting research titled "**Primary health care through COVID-19 pandemic, from the viewpoint of govt. medical officers: a qualitative study**". Since you have been working at PHC during this ongoing pandemic, we want to know your experiences in providing primary health care services through this challenging time. Our team wants to learn from your field experiences on the factors that influenced delivery of health care services to generate recommendations for improving the quality of health care.

The interview process will be audio recorded and will be used only for academic research purpose. We would encourage you to share your views without any hesitation and please feel free to ask your queries without any hesitation. You can choose not to respond any of the questions if you find them uncomfortable to answer. If you are giving consent to participate in our research, we will start our interview.

#### **Domain\_1: Perception of MO on primary health care.**

Q. According to you what do you think is primary health care?

- What are the different aspects of primary health care?
- How can you describe the primary health care?

#### **Domain\_2: Management of primary health care services**

1. How the workload has been changed during this pandemic ?
2. What are the additional assigned responsibilities?
3. How these additional assigned responsibilities have been influencing routine primary health care services?



- How OPD service has been influenced?
  - How IPD service has been influenced?
  - How Emergency service has been influenced?
  - How Routine immunization service has been affected?
  - How MCH care and family planning service has been affected?
  - How pandemic has influenced monitoring and surveillance of locally prevalent diseases
  - How the distribution of drugs under "Niramaya Yojna " has been affected?
  - How the covid-19 has influenced the Health Education/IEC activities under different health programmes ?
4. How would you assess the resource of your hospital to manage the needs of patients during COVID-19 pandemic?
- Equipment shortages (e.g., ventilators, N95 masks, hospital beds)
  - Staffing shortages (as health care workers are exposed to the virus)
  - PPE guidelines and training (staff knowledge and adherence for appropriate use)
  - Resource scarcity contingency plans are in place and widely known by staff
5. According to you how the fear of getting infected with COVID-19 vaccine has influenced the behaviour of hospital staffs towards patient?
6. To what extent are telephone consults adopted and what is their impact on practice management?
7. How do the steps taken by the state govt. have alleviate this fear and helped in delivery of health care service.
- Guidelines issued by state govt.
  - Infection control measures at hospital
  - Supply of PPE Kit
  - Vaccination of health workers
8. Coping strategies of hospital staffs
1. How do the hospital staffs protect themselves from getting infected with COVID-19
  2. How do the staffs of your hospital cope with this changing work environment ?
- How they schedule their work ?
  - How they do counselling of patients about their limitations and changing priorities ?
  - How do they manage stress ?

**Domain: 3: Facilitating factors and barriers in service delivery.**

1. Please share the factors that were helpful in delivering health care at your hospital.

2. Please share the factors that acted as barriers in delivering health care at your hospital.


**Domain 4: How primary health care can effectively adopt to public health emergencies?**

Q. Sir/Madam, according to you what steps need to be taken to improve quality of primary health care during this challenging time of COVID-19 pandemic.

Thank you, Sir/Madam for participating in our research and sparing your valuable time and experiences to

**Annexure\_2**

**IEC Clearance**

<p><b>INSTITUTIONAL ETHICS COMMITTEE</b>  <b>M.K.C.G. MEDICAL COLLEGE,</b>          BRAHMAPUR-760 004, GANJAM.(ODISHA)          Phone : 0680-2292746 (Principal Office) Fax No:- 0680-2292809          E-mail: prin_mkcgmcberhampur@yahoo.com</p>	
<p>No.....<u>832</u>...../ Chairman-IEC, M.K.C.G.Medical College, Brahmapur-4</p>	
<p><b>CERTIFICATE</b>  <i>(For Faculty Members)</i></p>	
<p>The Institutional Ethics Committee has approved the protocol titled  <u><b>PRIMARY HEALTH CARE THROUGH COVID-19 PANDEMIC FROM THE VIEW          POINT OF GOVT. MEDICAL OFFICERS: A QUALITATIVE STUDY</b></u> of  <u><b>Prof. (Dr.) Durga Madhab Satapathy</b></u>, Professor in the Department of Community Medicine to be          conducted for Six Months at M.K.C.G. Medical College, Brahmapur- 4, Odisha.</p>	
	<p><i>Jyanti Prava Behera</i>  <u>18-12-20</u>  <b>Member Secretary IEC</b>  <b>Prof. &amp; HOD of Pharmacology</b>          M.K.C.G. Medical College,          Brahmapur-4.</p>
<p>* The original certificate is to be preserved by the candidate.</p>	